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10/694,349	10/28/2003	Wolfgang Lubcke	9090-0158	2564
23364 7590 06/26/2007 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			EXAMINER ZHU, JOHN X	
			ART UNIT 2858	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/694,349  
Filing Date: October 28, 2003  
Appellant(s): LUBCKE ET AL.

**MAILED**

**JUN 26 2007**

**GROUP 2800**

Felix J. D'Ambrosio  
For Appellant

**EXAMINER'S ANSWER**

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

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This is in response to the appeal brief filed 7/6/2006 appealing from the Office action mailed 12/13/2005.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

Venditti (US 5,248,933)

Wetzel et al. (US 5,742,225)

Schmidt et al. (US 5,940,774)

Belforte et al. (US 6,194,909)

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, & 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Venditti, US 5,248,933.

As per Claim 1, Venditti discloses a measuring instrument 20 and a higher-order unit 18, said measuring instrument and said higher-order unit being electrically

connected with each other by a first pair of lines (signal 1, signal 2), and a second pair of lines (power+, power-), (FIG. 10), wherein during operation a signal current flows via said first pair of lines (signal 1, signal 2) and a supply current flows via said second pair of lines (column 6, lines 15-17, power +, power -), said signal current representing an instantaneous measured value (column 6, line 4), and said supply current and at least a portion of the signal current supply said measuring instrument (column 6, lines 17-20).

As per Claim 6, Venditti further discloses the measuring arrangement as applied to Claim 1 above, and further discloses each of said first and said second pairs of lines is connected to a current or voltage limiter ( $R_1$  &  $R_2$ , column 3, lines 64-65).

As per Claim 10, Venditti discloses an electrically powered measuring device 20, comprising two ports (46, a plurality of terminals in FIG. 1 & 10) that constitute a two-wire interface for connecting a dual-conductor cable (pair of lines: power+, power-), by way of which electric power (power+, power-) is fed to the measuring device 20, and a measuring signal (signal 1, signal 2) to the measuring device 20 is transmitted, wherein at least one additional port (46, a plurality of terminals in FIG. 1 & 10) is provided for connecting a second cable (pair of lines: power+, power-), and wherein the said second cable allows the feeding of additional electric power (power+, power-) to the measuring device.

As per Claim 11, Venditti discloses an electrically powered measuring device 20, wherein said at least one additional port comprises two further ports (46, a plurality of terminals in FIG. 1 & 10) constituting a second two-wire interface for connecting a second dual-conductor cable (pair of lines: power+, power-).

As per Claim 12, Venditti discloses an electrically powered measuring device 20, wherein the current emanating from the first two-wire interface and/or current emanating from the second two-wire interface is limited ( $R_1$  &  $R_2$ , limiting resistors, column 3, lines 64-65).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 & 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venditti, US 5,248,933, in view of Wetzel et al., US 5,742,225.

As per Claim 2, Venditti discloses the measuring arrangement as applied to Claim 1, above.

Venditti does not disclose a variable supply current in accordance with the current power demand of the measuring instrument.

Wetzel discloses a measuring arrangement where the supply current is varied (column 2, lines 54-59).

Therefore, it would have been obvious to a person of ordinary skill in the art to include a variable supply current, as taught by Wetzel, in order to accommodate the need of the load (see FIG. 2).

As per Claims 8 & 9, Venditti discloses the measuring arrangement as applied to Claim 1, above.

Venditti does not disclose a sensor for detecting at least one physical variable, or a bus line for sending the said physical variable.

Wetzel discloses a sensor 10 for detection of at least one physical variable (column 2, lines 39-40 & 62-64), and a bus line 3 for sending the said physical variable.

Therefore, it would have been obvious to a person of ordinary skill in the art to include a sensor detection of at least one physical variable and a line for sending the said physical variable, as taught by Wetzel, in order to monitor the higher order unit.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Venditti, US 5,248,933, in view of Schmidt et al., US 5,940,774.

As per Claim 3, Venditti discloses a measuring arrangement as applied to Claim 1, above. Venditti further discloses one transmitter feed unit 24, operable to supply power to a measurement instrument.

Venditti does not disclose a higher order unit comprising at least two transmitter feed units, each of said transmitter feed units being operable to supply a conventional two-wire measuring instrument with electrical power.

Schmidt discloses a measuring arrangement, wherein the higher order unit (cell controller) comprises at least two transmitter feed units (Tx/Rx Processing: Transmit/Receive Signal Processing), each of said transmitter feed units being operable to supply a conventional two-wire measuring instrument (TRU: Transmit Receive Unit) with electrical power (CPS: Channel Power Setting).

Therefore, it would have been obvious to a person of ordinary skill in the art to include at least two transmitter feed units that are operable to supply a two-wire measuring instrument with electrical power, as taught by Schmidt, in the measurement arrangement of Venditti, in order to supply power and transmit signals to the measuring unit.

As per Claims 4 & 5, Venditti in view of Schmidt disclose a measuring arrangement as applied to Claim 3, above.

Venditti in view of Schmidt do not explicitly disclose a connection between the first and second pairs of lines with the two transmitter feed units.

However, it would be obvious to a person of ordinary skill in the art to connect the first and second pairs of lines with the two transmitter feed units, since each of the transmitter feed units, as disclosed by Schmidt, is operable to be connected to a pair of lines.



Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Venditti, US 5,248,933, in view of Belforte et al., US 6,194,909.

Venditti discloses the measuring arrangement as applied to Claim 1, above. Venditti does not disclose the first and second pairs of lines that are galvanic isolated from each other.

Belforte discloses a measuring arrangement where the first and second pairs of lines are galvanic isolated (by device 17) from each other (column 2, lines 29-31).

Therefore, it would have been obvious to a person of ordinary skill in the art to use galvanic isolation, as taught by Belforte, in the measuring arrangement of Venditti, in order to isolate the measuring instrument from the higher order unit (i.e. the device under test).

#### **(10) Response to Argument**

(1)

Claim 1 is argued on the grounds that Appellant does not agree that the arrangement as noted by the Examiner powers the measuring instrument utilizing said supply current and at least a portion of the signal current supply (Page 5, lines 1-4). The Examiner maintains that **claim 1 makes no mention regarding powering a measuring instrument**, but rather states, "*said supply current and at least a portion of the signal current supply said measuring instrument.*", Venditti discloses this. Fig. 10 shows a supply current (power+, power-) flowing into (understood as supplying) and out of the measuring instrument, and a signal current (Signal 1, Signal 2) flowing (understood as

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supplying) into the measuring instrument 20. The arrangement as disclosed by Venditti is absolutely related to the limitations of claim 1 as both are claiming measuring arrangements. Venditti discloses every aspect of claim 1.

Appellant also argues "*Venditti does not power the measuring unit as recited in claim 1.*" (Page 5, line10). Again, claim 1 does not mention anything regarding powering the measuring unit.

Appellant further argues Venditti does not "*disclose the use of one of two suppling [sic] currents*" (Page 5, lines 10-11) nor "*disclose that one of the two supplying currents additionally represents a measured value.*" (Page 5, lines 12-14). However, these arguments are completely inconsistent with the language of claim 1, since the claim does not include two supply currents. Claim 1 includes two currents, but theses are not both supply currents, but rather a signal current which flows via a first pair lines, and a supply current which flows via a second pair of lines. Claim 1 further includes "*the signal current **representing** an instantaneous measured value*" (emphasis added). Venditti discloses a signal current, flowing via lines Signal 1 and Signal 2 that is representative of an instantaneous measured value as it is used to calibrate the measuring system. Hence, Venditti teaches all limitations of claim 1.

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Appellant argues Wetzel et al in combination with Venditti does not teach the power feature noted above (Page 5, paragraph 3, lines 1-2). Again, the powering features “noted above” are not included in claim 1. Wetzel teaches varying the supplying current in accordance with demand, and measuring and transmitting physical variables.

(3) and (4)

Appellant argues “*the transmitter feed units of claims 3-5 are not apparent from Schmidt et al*” (Page 6, paragraph 1, lines 3-4). The Examiner maintains the position that Schmidt does in fact teach the transmitter feed units of claims 3-5. Transmitter feed units simply are the terminals of the pair of lines, of which could be transmitter/receiver terminals. Schmidt explicitly disclose a device comprising a plurality of these terminals (Fig. 4) for transmitting and receiving purpose. Furthermore, for these units to be operable, they necessarily need a power supplying line.

Appellant lastly argues Belforte et al. lacks the necessary teaching to “*assis [sic] Venditti*” when considering claim 7 (Page 6, paragraph 1, lines 5-6). However, the teachings of galvanic isolated lines are taught in Belforte (Column 2, lines 29-31, the testing system and the modules under test are connected by lines).

#### **(11) Related Proceeding(s) Appendix**

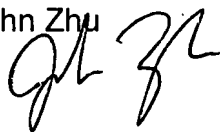
No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

John Zhu



Conferees:

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